Home Inspection Guidance

Purpose: To provide individuals with helpful home inspection information, that could save you unnecessary repairs and money in the future. New York State unlike Connecticut, California or New Jersey does not require a home inspection, prior to purchase. However, most bank institutions would prefer an inspection to protect their investment. In addition, New York State does not require an individual to hold an inspection license. Knowing this, one should either interview an inspector prior to performing this activity or be knowledgeable of the inspection elements in case they want to inspect the home themselves.

Remember, "What we see depends greatly on what we are looking for"

In order to do this task properly you should discuss your plan of events. A couple could even divide the events/tasks and separate upon arriving at the home. Either way, the following elements can be performed out of sequence, but allow time to review each element. A normal inspection usually takes a professional approximately 2 ½ hours to perform.

Before you begin, ask yourself the following:

1. Is the item located properly within the structure?
2. Can the item be repaired if found damaged?
3. How much would it cost to repair the item?

Know your priorities or goals before starting:

1. Remember the square footage of a home directly affects your taxes as well as the property size and location. A ranch with the same square footage as a two-story home usually is taxed more. The reason is the amount of property it occupies. In addition, a home located on a corner parcel is taxed more than a parcel of the same square footage located in the middle of a street.
2. What is the area zoned for?
3. How many houses in the area are for sale? Why?

Anticipate seller obstacles and limited time frame for inspection.

1. Seller has most likely applied fresh paint to the structure. (Be aware that lead paint was used before 1978).
2. The heat has been most likely turned up (above 70 degrees). Look for drafts, or window markings, that would indicate plastic was installed to keep wind/cold from entering the home. Are windows double paned and do the fixtures operate properly?
3. Sellers sometimes remove "large" furniture from small rooms or install mirrors to visually increase the size of an area.
4. Lighting fixtures may have higher wattage bulbs installed in areas where windows are smaller in size.

Note: When possible have the owner demonstrate equipment, such as sprinkler systems, and central air conditioning. This will prevent legal concerns, if the item is damaged at the time of the demonstration. Each inspection element is identified with the respective items to review.

Property:

Individuals are so excited about the home, they usually don't pay that much attention to the property. Remember, its occupants, plumbing, and weather affect the property.

Look for the following:

1. Saturated soil or large depressions in the soil. Both of these items can indicate a faulty septic system. The average septic system should be cleaned out every 15 – 20 years.
2. Odors can indicate sewage backup.
3. Trees and plants should be a minimum of 12 inches away from the structure.
4. Water puddling areas that allow water to enter the basement/cellar area. These areas include patios, decks, walkways, stoops and driveways.
5. Septic systems should be a minimum of 150 feet. away from the nearest well. Local Codes recently changed now requiring 200 feet. distance for new structures.
6. For pools check electric for a ground fault and the cable should be buried. In addition, the area should be fenced in with a lockable device. Review the coping, main drain, water inlet valve, skimmer, pump and filtering system condition.
7. Buried steel oil tanks should be either removed or filled with sand. In most areas fiberglass tanks are used as replacement.

Roof:

Building code allows up to 3 layers of asphalt shingles installed on a given roof. Of course, this depends on the condition of the roof rafters and plywood below. The average life expectancy of an asphalt roof is 15 – 20 years. The higher the roof pitches the longer the life span, because snow does not have a chance to build-up.

Look for the following:

1. A sagging roof could indicate rafter concerns. The beams could be affected by improper (venting) causing humidity to rest on the beams. Code requires 1 square foot of venting for every 300 square foot of attic area. Beams also could be on 24 inches on center with 3 layers of shingles installed.
2. Gutters filled with debri can cause water to backup into the soffit area.
3. Sandy finish on shingles should be intact.

Foundation:

There is a difference between a basement and a cellar. A basement 4 feet below grade, and 6 feet above grade with a 7 feet – 6 inch ceiling height, two exits one being a 3 foot x 4 foot window can be used as "living space". A cellar below grade can "only" be used as a recreation area. Cement used for a foundation is rated at a minimum of 1,800 psi.

Look for the following:

1. Horizontal cracks indicate settlement and in some cases backfilling was performed before the cement cured.
2. Vertical cracks indicate structural concerns. Look inside the structure for excess loading in that area.
3. Crawl spaces should be 18 inches above the soil and 2 foot vents installed every 100 feet.
4. Chimney should be 2 foot 6 inches above the roof or 10 foot away from the highest peak to prevent down drafts. The chimney should have metal flashing at the roof connection, a chimney cap and all bricks in-place. Recommend a chimney be cleaned prior to closing. Structural brick can withstand 1,800 psi before breaking and should be installed by using metal ties every 6^{th} course.
5. Concrete block walls are as strong as most cement if installed properly. 12 courses of concrete blocks equate out to 8 foot in height.
6. An extremely long basement wall may require a concrete pier installed inside. (Usually 12 inches wide by 2 foot long running the height of the basement wall).
7. Major concerns are walls that are leaning or bulging inward. This may indicate excessive loading in that area, poor cement mixture or backfilling before the cement cured. Usually by shoring the foundation wall to the footing and adding additional beams above will correct this condition. If left alone, beams, piping, windows and doors above will be affected.

Siding:

Look for the following:

1. Siding condition should not be bridle or cracked. The weather stripping around openings such as doors, windows and trim should be uniformed.
2. Check also the trim condition.

Garage:

Look for the following:

1. Fire retard sheetrock is installed all around and on the ceiling of an attached garage.

2. Electric door openings operate properly. The garage door springs should have a safety lock attached to the door braces to ensure that the spring is held in the event it breaks due to wear.
3. Garage doors entering the home should be metal which open towards the garage. They are allowed to open inward if there is a hall with another door into the home.

Plumbing:

The average water usage is 55 gallons a day or 20,000 gallons in a year. The average 3 bedroom home requires a minimum of 960 gallon septic system and a 4 bedroom home requires 1,200 gallon septic system. The survey should state the size of your septic system.

Look for the following:

1. There must be a 4 inch house trap installed that includes a vent pipe. The sewage line inside the home should be angled at 1/8 inch per foot of run.
2. Sinks should have 1 ½ inch pipes, tubes 2 inch pipes and lavatories 3 inch pipes.
3. The shower pan causes the most interior damage to homes. To check the pan fill the tub ½ way and when you release the water check below for leakage.
4. Main shut off valve operating properly.
5. Water should have a minimum pressure of 40 psi.
6. Review the type of piping installed, such as galvanize, iron, copper or plastic. If you see rust deposits in the water, it usually indicates that the piping (such as iron or galvanize) has become clogged due to iron deposits.

Heating:

Heating a home is based on 70 degrees F. inside, with 0 degrees F outside with 15 mph winds. Usually a quick way to determine the required baseboard for a given room is ¼ of the total linear footage. A more accurate way to determine how many BTUs to heat a room is, multiply the length of the room by its width and multiply by 40, then divide by 600. If the room ceiling is 7 foot 6 inches high multiply be 38 and divide by 600. For 7 foot high ceilings multiply be 35 and divide by 600. If the home is designed for electric heat usually 1 ½ watts is required per cubic foot of area. In older homes use 2 watts per cubic foot.

Look for the following:

1. Rust deposits on the furnace can indicate either a heat exchanger or furnace coil concern.
2. Soot indicates a faulty flue system.
3. Continuous running of the furnace indicates the expansion tank is water logged.
4. Carbon monoxide or carbon dioxide detectors should be installed within the furnace area. This is not a code requirement but recommended.
5. Fire retard sheetrock should be installed above the furnace.

6. Furnaces should be located 6 inches from side walls, and vented at least 18 inches above the furnace. The furnace should be set between 140 – 180 degrees F with a kill switch located away from the furnace. If a relief valve opens, you don't want to be standing in water to shut off a furnace.
7. Fireplaces can withstand 2,000 degrees F. The hearth should be a minimum of 16 inches away unless the fireplace opening is over 6 feet. Then the hearth should be 20 inches away and extend 12 inches beyond each side.

Air Conditioning:

To determine air conditioning BTUs needed to cool a given area. Find the square footage of the room (length x width) and multiply by 20.

Electric:

Aluminum wiring was stopped in the late 70s. If the home was found to have aluminum wiring your allowed to pigtail (tie) copper wiring to the aluminum wiring 6 inches away from a given outlet box. The outlet box connection is the area of concern, which is the cause for most internal fires. You should remove at least 3 outlets within the house to examine the wiring. If your not sure how much service you need to fit your life style, perform the following. Multiply the service coming into the home (220) by the total amps identified in your amp box. (The amp service is identified on the top section of the box). This will give you the total wattage for that home. Now, in alphabetical order list all of your items with their wattage that you use and plan to use in the future. (e.g. toasters, microwave, heaters, air conditioning units, bulbs, coffee makers, dish washer, broilers, hair dryers). Add up the total from your list. It should equal or be less than the total wattage for the home. If it's higher, you need to increase the house service.

Look for the following:

1. Old "pull handle" fuses usually become jammed causing shorting/fires in older homes.
2. Outlets 30 years or older should be changed out due to oxidation and their grounds checked.
3. Circuits that close often indicate an overloading condition.
4. Wiring should never be installed under any beam.
5. Switches should be 48 inches from the floor and 18 inches away from any door opening.
6. Outlets should be 16 inches from the floor to the top of the outlet box and approximately 7 foot on center and 4 feet from a given door.
7. Ground faults should be installed in all bathrooms, garage, kitchen and outside fixtures.
8. Smoke detectors are required on all levels.
9. Electrical exhaust fans in bathrooms and kitchens should be operating.

Structural:

Two issues to be concerned about are live loads and dead loads. A dead load is the house materials. Live loads are your furniture and people. An example of this is a room 400 square feet with 10,000 pounds resting on the floor, is carrying 25 pounds per square foot. Code requires no more than 40 pounds per square foot, before you increase the floor beam size. This becomes important if large a hot tub is installed without considering the load on the floor beams below.

Look for the following:

1. Lally columns should be approximately 8 foot 6 inches on center.
2. Girders should be tied together and are usually 3 – 2x8s as a minimum.
3. Sill plates should be pressure treated.
4. Floor bridging should be approximately 4 feet on center. (usually 2x4s or 1 inch steel braces).
5. Insulation under floor beams is recommended to conserve heat loss. Usually 8 to 10 inches of insulation could save you 20% on heat loss.
6. Anchor bolts tie the sill to the cement wall and should be located approximately 8 feet on center and 1 foot from each corner of the house.
7. Basement steps should have 6 foot 8 inches of headroom from the step to the ceiling above. Treads should be 9 inches and rises 8 inches. Usually, there are a total of 13 steps to a given floor with a handrail.
8. Ceiling beams should be no less than 2 x 6s.
9. Rafter beams should be no less than 2 x 6s, but usually are 2 x 8s.
10. Attics require 1 square foot of venting for every 300 square feet of space. (attics can be used for occupancy if 50% of the space is 7 foot 6 inches high and the remaining half is 4 foot 6 inches high.
11. Beams that have 1/3 of its timber cut must be reinforced. This condition is found when an addition is made and the beam is cut to make room for a new pipe.
12. Headers (double beams) should be installed over all openings. However, be careful here when performing the inspection. Sometimes adding larger beams over an opening can cause serious loading concerns. An example of this is when an addition is added on to the first floor, which extends outward by 10 feet. Some builders will not remove the old roof because the additions new roof will cover it. Now you have the weight of both roofs, (plywood, beams, shingles) and the existing load of the structure above “resting on the header you installed. This load does not include furniture, etc. This installation if not calculated properly could possibly collapse with excess snow loading or even during construction. If you see large openings that seem to have an inward ceiling bulge you need to contact a professional who probably will install additional 4 x 4 beams in the corners. As a guide, you should use the following beams (doubled up) for the openings specified.
    a. 3 ½ foot opening use 2 – 2 x 6s
    b. 5 foot opening use 2 – 2 x 8s
    c. 6 ½ feet use 2 – 2 x 10s
    d. Over that use 2 – 2 x 12s (Contact the building department for guidance)

13. Items that squeak such as stairs, flooring or joists can be easily fixed by installing a wedge under the area of concern.
14. Water stains noticed in ceilings can be corrected by applying shellac over the stain and then paint the area. If this isn't done, the stain will show through the paint.
15. Egress codes require that bedroom windows be 6 foot 8 inches from the floor to the top of the window and 3 foot 6 inches to the bottom frame.

Summary:

Review each section in detail, before arriving at the structure. You should always request that the furnace, chimney/fireplace, central air units and hot water tanks be serviced and/or cleaned prior to purchase. Newly built homes have their concerns as well. Lately, there have been more termites noticed in new structures. The reason is the contractor cost for the carting permit. Some builders will backfill construction debri against the foundation instead of carting it away. Also, framing is mostly performed by shooting nails into the timber instead of using hammers. This has caused beams to split or twist, when weight to applied to that area. I always recommend that you interview your contractor(s) past customers before signing a contract.

I can only hope that this information was helpful and if you require additional assistance you can call me at home 631-929-6986. In addition, the following listing was developed by the American Society Of Home Inspectors that identifies a national average (life years expectancy) of most common items for your reference.

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ITEM DESCRIPTION	MAX. LIFE (YRS)
AIR CONDITION COMPRESSOR	15
COMPACTOR	10
AIR CONDITION CONDENSER	8
DISHWASHER	8
RANGE/OVEN	15
REFRIGERATOR	10
GUTTERS/LEADERS	30
PAINT	6
ALUMINUM SIDING	25
ASBESTOS SIDING	40
VINYL SIDING	40
WOOD SIDING	30
WINDOWS (STEEL CASEMENT)	35
WINDOW STORMS/SCREENS	25
VINYL FLOORING	12
KITCHEN CABINETS	17
BOILER (CAST IRON)	30
STEEL FUEL TANK	20
HEAT PUMP	10
OIL BURNER	12
PUMPS/VALVES	10
FAUCETS	13
FIXTURES (PLUMBING)	35
PIPING	45
SHOWER PAN (METAL)	22
SUMP PUMP	10
WATER HEATERS (GAS/OIL/ELEC)	10
ELECTRIC COMPONENTS	25
WELL PUMP	15